

In the Matter of)
)
Rulemaking Under Part 97 of)
the Communications Act of 1934,) Docket No. RM-10740
as Amended, to Establish Technical)
Standards for Certain Amateur)
Radio Telephony Transmissions)

July 21, 2003

To: The Commission:

This petition to amend Part 97 of the Communications Act of 1934, as amended, has recommended limiting amateur station transmissions using J3E emissions to no more than 2.8 KHz bandwidth and using A3E emissions to no more than 5.6 KHz bandwidth, when operating below 28.8 MHz. This appears unreasonable and unnecessary in my opinion, and this petition should be withdrawn. My reasons are summarized below.

My background has been in broadcast engineering, from station engineer to designer/manufacturer of broadcast transmitters, and in industrial, scientific and medical applications and design of RF generators. I have prepared numerous equipment type-notifications and type-acceptances for the Commission in the past 25 years. I hold an amateur extra class license, and have been licensed over thirty years.

1) At issue is the apparent concern of an isolated few users of the amateur service, who have taken the liberty to propose technical changes for many thousands of users. The poor operating practices of a few should not be the justification for such wide-sweeping regulatory changes as requested by the petitioners. By yielding to such pressures, the Commission may set an undue precedent, which may open 'floodgates' for additional petitioners to submit similar changes to the rules based on their own opinions and wishes.

2) The amateur service, by definition, has been self-policing since its inception. It is well known that many innovations in RF technology have come from the existence of this service and its skilled users. This petition has not cited concerns or evidence of interference with other services or users of the spectrum outside of the amateur service. The amateur service should be allowed to take care of any interference within its own allocation, by cooperative band-sharing, by frequency coordination, by voluntary guidelines, by technical innovations and lastly, by FCC enforcement of the spectral purity requirements for amateur equipment as specified in Part 97 of the Rules. It is not evident that the petitioners have utilized any of these techniques to solve their concerns.

3) No quantitative measures of the proposed technical requirements were specified, leaving them as capricious, subjective and therefore unenforceable standards, which may be misinterpreted. For example, one questions whether they are bandwidths measured at the output of a transmitter for a given amount of attenuation (i.e., 6 dB) below center

carrier frequency. Paragraphs 97.307(b-d) of the requirements for amateur equipment already provide adequate regulation of transmitter spectral purity.

4) The suggested restriction of A3E mode to 5.6 KHz is arbitrary and overly restrictive. Technical publications from both amateur radio and academic sources such as the well-known Terman "Radio Engineering" textbooks have suggested at least 6 to 8 KHz RF bandwidths for intelligible and understandable DSB telephony. In Part 2 of the Commissions own regulations, 6 KHz is given as the appropriate bandwidth for commercial quality DSB telephony (not high fidelity). The petitioners choice of 5.6 KHz appears to have been mathematically derived by doubling their 2.8 KHz suggested bandwidth for J3E. This calculation is technically incorrect, as it has no allowance for the carrier energy present in DSB but not in SC-SSB emissions. Finally, it is widely known from experience on amateur frequency allocations that restricted bandwidth audio can be unintelligible over natural atmospheric noise or in the presence of adjacent J3E emissions. A3E already suffers from signal to noise disadvantages as compared to J3E.

4) Adoption of this petition into rulemaking goes against the Government's own objectives of streamlining regulations and reducing paperwork. The existing requirements in Part 97 of the Commission's Rules and Regulations already regulate amateur transmitter output purity. By adopting this petition layered on top of the existing requirements, the Commission would overly specify the output requirements for amateur transmitters. Careful revisions of all of the technical requirements for equipment in Part 97 should be required before adopting such piecemeal modifications to the Rules.

In conclusion, I request that the Commission remove petition RM-10740 from further consideration, for the reasons I have stated in this letter.

Respectfully Submitted,
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